Lesson 94 - Exercise And Children

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- Article #1: Exercise for Baby By Dr. Herbert M. Shelton

1. Introduction

With today's current trend of "sit-down" activities, America's facing a grim reality—our youth population is not as physically fit as we thought it was. In tests done to determine strength, endurance and physical ability today's youth scored very poorly. It is not uncommon to read about a teenager succumbing to a heart attack while performing intense physical training. Passivity has a strong foothold on the youth of today. With the availability of video games, television, computers and all the other leisure devices, our children are gradually becoming less and less capable of sustaining any substantial physical activity.

Many children who dwell in the large industrialized cities throughout the U.S.A. (and elsewhere) are being deprived of experiencing the "real" outdoors. They have no working knowledge of nature—no connection whatsoever with wildlife and many could not even tell you where the food they consume came from.

It is very disturbing to think that the vast majority of our youth are daily ingesting pseudo-foods and would rather die before they sample some wholesome foods. The parents in today's fast-paced, make-a-quick-buck society are relinquishing their obligation of protecting and taking care of their children and are oftentimes leaving their children's dietary needs to the whims of the junk food manufacturers and physicians who are less informed about nutrition than even they are. It is no big surprise when our children are constantly placed on the treadmill of visiting doctors to having no stamina at all in accomplishing the simplest physical task.

Parents, your children are being victimized and so are you. It is time you grab the reins and take control! Don't allow the manufacturers of trash foods to pollute your children's bodies, nor their minds.

You need to pay close attention to the types of foods you buy, the types of influences that your children receive and last but not least you the parents should be setting the prime examples for your young ones. This includes a rigorous exercise program that you can include your children in.

Natural Hygiene recognizes the value of physical fitness and advocates it as one of the main essentials in life along with a diet of fresh, raw fruits, vegetables, nuts and seeds; fresh air; sunshine; pure water; etc. Natural Hygienists teach that your child needs to spend most of his/her time in an environment that promotes healthful habits and is conducive to building strength and stamina and endurance. This environment would be one where the child derives pleasure in using his/her body to its maximum potential. The sooner you start providing this environment, the better.

2. Exercise From Birth To Adolescence

2.1 Different Stages of Development

2.1.1 Infancy: Birth to First Birthday

To a lot of people the mere suggestion of exercise for an infant brings all sorts of reactions. But a factor that has been long ignored is that behavior patterns established early in life tend to be self-perpetrating. The child is much more likely to be receptive to physical activity if exposed at an early age than a child who is not exposed at all or much later. As parents then, the job of insuring your child's total well-being is entirely yours, and it is crucial that only the best quality of input is directed at your child.

Today children are being shortchanged. In this increasingly demanding society where both parents are forced into the workforce just to "make ends meet" children are viewed as mere appendages—as tax writeoffs of extra expenses. They are not viewed as replacements for the previous generations to carry on the work of tomorrow. If they were, they would be treated with more dignity and be allowed to grow and learn in a natural environment.

Most children nowadays are sentenced to spending the day inside artificial environments called day care centers. On the way to and from there they spend strapped into carseats. When they go out, instead of being allowed to walk they are strapped into strollers and rolled down the street. At home when mother and dad have no time for baby, he or she is placed in a mechanical swingset, a jolly jumper, or a playpen to keep out of mother or dad's way. This allows the parents to catch up on all they were unable to do all day because they had to be away at work. In this type of situation a child can scarcely grow to be supple and strong as when I was a child. I (and most people in my generation) grew up able to run and play all day to my heart's content. I got plenty of fresh air and my heart got a good workout. Most of the mechanical contrivances to imprison children were not yet invented. Also parents did not have to work so hard to earn a living as the cost of living was not so high as today—generally the mother remained at home with the children to teach them how to grow.

In many cases now the only muscles that are developed in infants are those, in their jaws and mouths. They're constantly being fed as a pacifier as it takes less effort to feed them than to indulge in physical activity with them. Parents, the key word is active. A child needs to be allowed to stretch and move him/herself without binding. Encourage him/her to crawl and make other physical motions.

The First Six Months: This time is spent getting acquainted with your newborn, giving love and warmth. It is also a good idea to move the infant about while holding him/her to get s/he familiarized with motion. Even though the child might seem floppy at first, don't be alarmed. With practice certain exercises will stimulate the muscles and strengthen them.

Besides merely moving the infant about in your arms, use gravity to produce physical activity in your baby. Hold your infant in the air horizontally, face downward. S/he will instinctively use the muscles of the neck and trunk to support the head and body against the pull of gravity. You can begin this activity as early as four weeks and as the weeks progress you will notice a remarkable difference in your child. S/he will be able to raise the head, arms and legs on his/her own.

Remember that at birth the strongest muscles are in the back of the neck. The child is better able to support its head when face down than face up.

By ten weeks you can start pulling the child up by both arms slowly. At first his/her head may bob about a little, and that due to a lack of control in that area, but with continued effort more strength is gained and more control of the neck and trunk will be noticeable.

Another activity is holding the child in a standing position so that s/he supports his/her own weight. The

infant pushes with its feet against whatever surface (your lap, the floor) it is stood on. This activity can be started early for maximum benefit—by the time your child reaches around 26 to 28 weeks. Such maneuvers will be rewarded by your child being able to make bouncing and dance-like movements which will lead to the child cultivating the habit of carrying his/her own body weight. Your child will sit earlier, crawl earlier and walk earlier than most children whose parents haven't taken the time to properly exercise the child. S/he will also have much better control in these activities.

At the end of the first six months when the infant gains the strength and ability to sit, be sure that s/he is well propped up at all times. Also the use of the arms and hands shouldn't be restricted to allow the muscles in those areas to be developed.

Most parents today with all the demands placed on them by society are finding less and less time to spend with their children, and are often inclined to purchase "time-saving devices" that are pawned off as aids to mom and dad and junior. Contraptions such as mechanical swingsets, jolly jumpers, walkers and mechanical rocking chairs to name a few. These devices encourage passivity in children and should be discouraged. They give the child a sense of movement coming from some force other than him or herself. As a parent it is imperative that you make time to see that your child receives all the physical activity possible. That is the key—allow your infant to fully experience freedom, freedom from diapers and other binding clothing whenever possible, freedom to explore the environment, freedom from all mechanical contrivances and restraints. Again, as a parent it is your responsibility to inspire active exercise in your children and with the practice you gain in the first six months of your child's life, your next six months will be even more fun as the effort you had put forth is now being rewarded.

As your child begins to show signs of more physical development such as crawling and creeping, you can add to his/her exercise by providing pillows and large cushions to his/her path. This will teach your child to crawl over obstacles and further develop the muscles. When s/he begins to stand and walk (which varies from child to child—usually within the range of 8 to 13 months), s/he will find other uses for the pillows and cushions. A child might use pillows for carrying toys around or any number of uses s/he might conceive. This process helps the child to develop muscular strength and a feeling of accomplishment.

As your child's ability increases, you will need to use your imagination more to maintain his/her interest. Here are a few suggestions: Pile larger stacks of pillows to form a tower, provide a large cardboard box that could be used as a tunnel or a house, etc.

At this age you can also try the wheelbarrow. This exercise is quite simple. Place the infant on a comfortable surface face down. Lift the bottom half of his/her body holding the child by the waist or legs around the ankles. On the onset the child might not respond, but soon will try to support his/her own weight with the arms.

Now as your child develops you must consider the matter of child-proofing your home. Some parents attempt to restrict their child's movements around the house as a means of insuring noninjury to child and damage to their valued possessions. This usually ends up in frustration for both parents and child.

It has been my experience that the sanest thing to do is to child-proof your home or apartment. What does child-proofing mean? It simply means that your house will not be a smorgasbord of temptation to the now mobile child. Everything you don't want your child into or that may pose a danger to him/her must be placed out of sight and out of reach plus a few other safeguards. Example: Place a gate near the stairways as the child has no concept of danger of heights at first. Remove all floor lamps, floor plants, covering electrical outlets, etc. My experience is that all the things you cherish when placed out of sight and reach can make for a more relaxed environment for the child and the parent. The child will be able to explore at his own pace without restriction of physical activity. Another important piece of advice—each year children are poisoned by household chemicals, paint removers, insecticides and other harmful health hazards. If you do use these, keep them in a well-secured area preferably where they're locked up. If living Hygienically, however, very few chemicals will be around the house (exceptions may be those used for hobbies and crafts).

Parents, exercise caution when it comes to the well-being of your youngster. Don't settle for cliches from so-called "experts." Be conscious of all phases of your child's growth and development. At this stage of development mother's milk is the optimum food. In discussing physical health it is imperative that the subject of diet be brought into play. Besides lack of physical activity, the conventional diet of high fat, high protein and high calories is a main contributing factor of juvenile obesity and other maladies. During the Vietnam War autopsies performed on the U.S. soldiers showed that the vast majority had the beginnings of heart disease. The majority of these soldiers were no older than twenty-two years of age. Disease does not always appear immediately. It tends to be cumulative. The common notion that if it doesn't harm me right away all is well, is deceptive. Remember all things take time to develop, even disease. The sooner we adapt a healthful lifestyle, the better the chances are of continuously enjoying our lives.

2.1.2 Toddlerhood: One to Three Years

This is the time which your child is fully experiencing his/her strength and skills. The entire world is at his or her command. S/he is constantly doing things that meet with parental disapproval. It might seem like the child is totally oblivious to anyone else's needs but his/her own. But the truth of the matter is that the child is exercising his/her independence, which can be very annoying at first. Your usual pace is slowed down by your child's insistance in taking care of him/herself. It will eventually soak in that this will be the way things are going to be, and it is the parent who will need to adapt in order for the child to grow. Let your youngster run, climb, hike, ride a tricycle—anything that will promote physically-motivated activity. At this point the best you can do as a parent is to encourage the child and to create a sense of enjoyment in what s/he is doing. Playing to exhaustion is a natural state for a child. However, we are programmed from our youth to feel that it is harmful to be exhausted—to sweat and get sore or experience any kind of pain from activity. Strenuous activity (play) that causes perspiration has been suppressed vigorously in this society. There are even campaigns by large deodorant manufacturers denouncing sweating as something abnormal and they've invested millions of dollars to promote such misinformation.

So parents, the ball is in your hands, and your goal now is to continue to provide inspiration for your youngster. Some children need less attention in this area than others. My sons need little inspiration to exercise. They are three and six years of age and have the energy of two cyclones which keeps my wife and I on our toes and in shape.

Remember to play hard whenever you play. The benefits are countless. Not only will you get yourself in shape, but you will instill an attitude of positivity toward physical activity in your child. The example parents set for their children now will determine his/her outlook on life in the future. So now is the time to start the exercise program for you and your children that you have been putting off for so long.

I also recommend that when you engage in physical activities that they be done outdoors as much as possible. It doesn't matter what the activity, when done in the fresh air it provides a great exchange of carbon monoxide and I oxygen and strengthens the lungs. But not every day will the weather be perfect and for those days when you might be forced to be indoors, you can pass the time and continue developing your child's well-being with some of these exercises:

The Back Lift: This is an excellent exercise for your toddler as it develops strength and flexibility in the back and shoulders and it is easy to learn. To execute this exercise your child should sit on the floor with legs out in front. The legs should be flexed moderately at the knees so that only the feet and buttocks are touching the floor. He/she then should lean backward placing the arms behind the back with fingers pointing backward and away from the body. From this position the child lifts the trunk off the ground supporting his/her entire weight with the feet and arms. This posture as stated before will strengthen the back and shoulders, ankles and arms. Incidentally this exercise can also be done outside, weather permitting.

Your youngster will need your enthusiasm and guidance in doing exercises. Keep the exercises varied

and short to enhance the period spent doing physical activity. As your youngster matures, more of his or her time will be spent outdoors at least part of the year, depending on the region you're living in.

It is common practice for parents to restrict outdoor activities during the winter months. This is not very wise because the child should be enjoying the cool fresh air that the winter brings. Another practice that is common is for the parent to overdress the child believing the child will "catch cold" if not bundled up. This bundling renders the child totally immobile—the child resembles a blimp ambling around the playground not being able to fully experience the outdoors. I've observed that children after a few minutes of hard play begin to shed layers of clothing naturally. From this I have come to the conclusion that if the child is dressed for movement and is allowed to remove clothing as needed, the body will generate its own heat on the strength of the physical activity the child is engaged in. When the weather is cold, it is wise to treat the situation as a normal occurrence. Let your child experience it and save yourself some aggravation by dressing your child so warm, that s/he is unable to move and comes indoors not knowing what to do with him/herself.

2.1.3 The Preschooler: Three to Six Years

This phase of your youngster's life is when s/he begins to demonstrate skills such as talking, limited reasoning abilities and more concern for others. S/he is capable of executing oral instructions but still likes to have a guide handy to take him/her through the paces. Your youngster is now developing a personality. Your child will let you know his/her dislikes and likes. S/he is forming attitudes and character that will serve him/her throughout the rest of his/her life. It is very important to recognize this and to instill only positive attributes.

Your youngster's motor skills are now well defined and activities like swimming, skating and running are more to his/her liking. S/he is now ready for vigorous activities and delights with being offered challenges. This phase of your child's life is important as are all phases of growth and any wrong programming will have to be deprogrammed in the future to accomplish any progress. Parents, be aware that girls are also entitled to develop strength and endurance, courage and all the benefits that go along with physical activity (more on this further on in the lesson).

Your youngster's body is now capable and functional and should be exposed to activities that will promote strength, endurance, coordination and conditioning. If you are like many parents, you will be entertaining visions of a star athlete in the family, but it will do you well to put such thoughts in the background for awhile. Let your youngster enjoy the pleasures of being active without great expectations. Running is a very good way to introduce your youngster to sports/fun activities.

Swimming is another excellent activity. At this point in your child's life it is important to be conscious of his/her limitations and you should not try to push the child beyond his/her capabilities. It is a good idea upon engaging your youngster in any sports activity that he or she be provided the proper clothing to begin with. Loose-fitting cotton clothing is necessary to allow for movement and the skin to breathe. Also an ill-fitting shoe could cause much discomfort and contribute to the child not being able to sustain any prolonged activity.

Remember also that your youngster enjoys the outdoors and that every effort should be made to see to it that s/he gets an opportunity to experience rain or snow, to touch, feel and be a part of the natural weather processes. At this time skills that your child has already developed should be built upon. To add to his/her basic abilities keep in mind at all times that childhood should be fun. So whatever activity your youngster is engaged in should be approached with an attitude of fun. This will minimize the chance of him/her becoming bored and disinterested and eliminate the need for parental pressuring to excell. Also don't stand by and criticize how your child is doing. This can cause your child to lose interest.

Your main function as a parent/coach is to monitor which phase of your child's daily exercises needs more attention. This can be determined by the following: How does s/he use the body to jump, run, drag

heavy objects or do chin-ups, sit-ups, push-ups, etc. These exercises promote strength and are within your child's range of capabilities and should be encouraged. Watch your child progress in these and make suggestions to the child as to what exercises need to be improved, whether the back should be straightened, which ones should be done more, etc.

The above-mentioned exercises can be classified into two groups: resistance and nonresistance. Resistance exercises are when the muscles are made to contract against an applied load, such as in weight training. Nonresistance exercises, on the other hand, are natural and involve the body to work against gravity with no outside items necessary. Within these two groups are subgroups: isometric and isotonic. Isometric exercises involve the muscles shortened by the tension of the exercise but does not contract. Isotonic exercises cause the muscles to contract under constant tension.

Nonresistance exercises are safer than resistance exercises, but are not as effective when it comes to building strength since the pull of gravity is the only load against the child's body. This type of exercise is limited by the size of the child and child's potential ability. Another plus for nonresistance exercises though is that it can be started at any age including infancy.

Resistance exercise training should not be introduced until age nine or ten and only after your child has been involved in nonresistance training to firm up the muscles and tendons for stress that is involved in a resistance exercise program. Remember nonresistance exercises are performed without the use of added load or resistance. Gravity and the child's weight are the only load on which the muscles work and requires minimal supervision. These, of course, can be performed by boys or girls.

Push-ups are one of the many nonresistance exercises. To execute the child lies face down and flat on the floor, hands next to the shoulders and palms down. Legs should be straight back with the heels together and the toes on the floor supported only on the hands and toes. The child should then push the body straight up until the arms are fully extended and the elbows are straight. The youngster then dips down by bending at the elbows until the chin and chest barely touch the floor, then straighten up again. It is important to keep the spine straight while performing push-ups—don't allow the tummy to sag to the ground. For a variation of this exercise place hands about two hands widths to the side of the shoulders.

Sit-ups are another excellent nonresistance exercise. The child lies flat on the back, hands clasped behind the head, legs bent so that the thighs and legs form a right angle with each other. The soles of the feet should be flat on the floor. Next s/he lifts up the trunk, curling the neck, shoulders and back completely off the floor. S/he then leans forward, touching the elbows to the knees. For added stress, the exercise can be performed on a slant board with head on down end. It is necessary to use a strap or a bar if your slant board is not equipped with one. This will prevent the body from slipping down the board. Also, the slant board should be used only after some degree of strength has been obtained by the child in doing sit-ups from the floor.

Knee bends are good as well. The youngster stands straight, feet about shoulder width apart. Hands are to be clasped behind the head or neck. S/he then squats down to an almost sitting position or below, keeping in mind not to drop the buttocks all the way down. This will flex the knee joints and create stress on the cartilage and ligaments in the legs. The child then returns to the original standing position straightening the legs at the knee. Placing a box or chair behind the child will aid the child from squatting too low. Caution should be exercised with this maneuver. Attempting to increase stress by squatting to a full deep knee bend position can be injurious to your child's knee joints.

Performing this exercise to maximum capacity can be boring and difficult for a child. To avoid these pitfalls, on this particular exercise you could determine the quantity of repetitions by the child's age times three.

Back to resistance exercises. The muscles work on a specific load while shortening. The muscles contract against an immovable object and develop tension but do not shorten. Programs that are classified as isotonic include weights, rubber bars, springs, etc. In this program the youngster performs

the absolute maximum number of repetitions possible beginning slowly and gradually working up to eight and then to twenty repetitions. As the weight increases, the repetitions decrease. It is important to note that many repetitions with moderate weight increases muscle size moreso than it adds strength. Performing with heavier weights increases the strength but you need to decrease the number of repetitions. So selecting a weight load that would permit a large number of repetitions is the way to go for large muscular appearance. Caution though: these exercises should not be introduced until your child starts showing physical signs of adolescent development.

2.1.4 School-Age: Six to Twelve

Ah, time for the youngster to be out in the world experiencing as an independent individual. Physically, the school-age child begins at the onset to lose the first baby did tooth and culminates with an appearance of a pre-adolescent growth spurt. The body is now taller and trimmer, height is increased by 30% and weight increases by as much as 100%. During this period the body proportion becomes more adult-like. The legs are not as short and the head is not as large as before. Along with physical growth comes proportionate strength increase.

Also noticeable is the six-year-old's improved coordination, balance and motor skills. The child at six tends to be restless and is better at starting a task than finishing it. This should be taken into consideration when you contemplate your child's exercise regimen. When the child is nine or ten, his/her capacity to follow through is a lot more developed. This will make it easier to introduce a routine and have it fulfilled. The youngster is now more prone to think in terms of long-term goals and what is involved in attaining them. This is the time to begin serious athletic training if you are so inclined.

The six- or seven-year-old is still introspective and shows an interest in imaginative play, which soon dwindles. The five- or six-year-old is usually cooperative and eager to please his/her parents but by ten or eleven the influences of persons outside the household tend to diminish the authority of the parent, i.e., teachers, coaches, peers, etc. The ten-year-old child might suddenly, seem resentful toward the parents control but might take advice from a total stranger better than his/her parents. This is a process that although it may be disturbing to the parents is all a part of the growth process. In some children it occurs at ten and in some it occurs during adolescence. Another thing that oftentimes occurs at this age is your youngster may develop a hero worship stage (normally not the parent) which can be a positive stage providing the hero is of good moral character and possesses positive attributes.

You may wish to involve your school-age youngster in some physical activity outside the household. Example: Enroll him/her in a karate class or a dance class, etc. A word of caution is in order here. A child's attitude at this phase is shaped by his/her friends, coaches, relatives, teachers, etc., and this leaves the child open to all sorts of inputs. He or she is at the mercy of others who are not the parents.

I can remember my childhood sport experience quite well. I played baseball, basketball, soccer, did relay running and broad jumping. Because what I did I was good at, I was constantly sought after to play on some team or the other. Now all this was exciting until I grew older and realized that everyone always expected the best from me. One of my teammates went on to become a professional baseball player for the Minnesota Twins, but when I got older I lost interest. I can still remember the disappointment everyone displayed when I decided against pursuing a career in baseball. I learned real young that when you are good at something you are never allowed to be a mere human anymore. As long as you're able to bring in a home run or stop a run from being scored, you're fine. But once you fail at an attempt, everyone forgets and you stand alone. That's a terrible feeling—especially for a youngster. I have added this bit of history because I have seen perfectly rational parents get very excited over a simple baseball game which their child is involved in—this places a lot of stress on a child.

Another factor to consider when involving your youngster in sports is injury. This is one of the many causes of deformity in youngsters today. Children are forced in little league to perform tasks that they are not ready for, i.e., pitching for long innings can cause permanent damage to the arm of the child who has not yet fully developed his/her arm. Mistakes like this one are committed oftentimes for the

entertainment and pride or ego boost of the parents.

2.1.5 Adolescence: Twelve to Eighteen

This is the age of rapid change. Your youngster is now experiencing a remarkable increase in strength and body shape. It is time for primary and secondary sexual characteristics to form. In boys a deeper voice is developed, facial and pubic hair as well, etc. With girls pubic axillary hair, enlarged breasts, broader hips, etc., develop. Along with outward physical signs there is also the onset of menstrual flow at about the age of thirteen to fifteen (younger in the less healthy, older or not at all in very athletic, healthy girls) and in the male the production of sperm occurs at this time.

Adolescence is a time for self examination and concern for worldly affairs. Great concern is placed on the adolescent's role in society. How s/he fits into peer relations is now more in the foreground than ever. It is not uncommon for your youngster to perform crazy and sometimes dangerous stunts to gain overall approval from peers or to impress a member of the opposite sex. At this point all that energy should be channelled into more constructive endeavors, namely physical fitness programs and other health-promoting activities. Example: swimming, skating, tennis, etc. Experiencing physical fitness brings excitement and joy to the youngster as well as respect for the body and health. With the adolescent who strives for fitness, engaging in the health-deteriorating practices of tobacco, liquor, drugs, etc., that are so common among our youth of today, are of less appeal than to someone who is less health oriented.

Again, this time proves to be difficult for the parent. The youngster continues to disregard his/her parents well-intended advice. Like in the earlier stages of the child's development, this is an expression of independence from parental influence and is quite normal. As a parent, your only solution is to offer guidance when requested.

If your child is involved in sports, the instructor will assume the role of surrogate parent in regard to career choices, advice, etc., and you should work closely with him/her to insure your child's total well-being. In adolescence the parent once again will notice the youngster's weight change rapidly. Infancy and adolescence are the only times in life that one produces fat cells and once these cells are produced they remain forever. Dieting shrinks the cells but, doesn't eliminate them. An overweight teenager is a sad sight as this will continue throughout life without the individual constantly monitoring his/her weight. Current statistics indicate that the average American is more overweight than ever in the past when people did more physical jobs for a living. The reason for this national weight problem, of course, is lack of exercise and the overeating of high-fat, high-protein, highly-processed foods.

It is recommended that as your youngster gets older s/he be introduced to fasting. Fasting is a natural and time-honored means of providing the mind and body with rest and recuperation. As the body rests while not having to digest, absorb or metabolize food, it is freed to go about its business of self-cleansing. The blood, the kidneys and the entire intestinal system rids itself of accumulated waste. The brain and nervous system refresh and retune themselves also. Hints on fasting: you should start with a very short and slow fast, say twelve to eighteen hours and gradually build to forty-eight hours. That is the safest and sanest approach to take when dealing with a teenager. Fasting means absence of food or drink, except pure water which should be consumed as needed. Avoid prolonged physical exertion (brief exercise is okay). Avoid long exposure to the sun or heat. Rest. The fast should be broken slowly, starting with fresh-squeezed fruit juices followed by solid foods a few hours later. The meal should be complimentary to the fast, i.e., long fasts should be followed by a small meal and vice versa.

One final note: In adolescence your child might be more prone to find solutions to problems in his/her own way. If you will recall, you probably did the same thing. I know I did. Some problems are less urgent than others but to your teenager all are urgent. And today's make-a-buck philosophy makes the teenager a prime target for all the fads that are currently swamping the market. Parents, everything that your child will ever be starts with you!

2.2 Other Factors Exercise and Females

Women in the U.S. have been handicapped by the old misconception that women are not supposed to do physical activity. This misinformation has served the U.S. males well in keeping their women in the background. I have lived in other societies where the women were allowed to take more control of their lives and they had fewer problems when they arrived at child-bearing age. The American female generally arrives at child-bearing age not being physically or mentally fit which explains the high incidence of congenital deformity that occurs daily in the hospitals throughout the United States. Most American women have difficult pregnancies and childbirth largely due to a lack of physical conditioning.

It has been standard practice to allocate less dollars for female physical education and athletic scholarships than for males (if any at all). It is finally dawning on the North American society that both girls and boys have the same physiological needs and the only difference is that girls have been excluded from any type of physical training programs.

2.2.1 Sleep

Sleep is an individualized process and can only be determined by the way the child functions throughout the day. If during the day the child appears irritable or sleepy, that child should nap. In studies done in the U.S., it was found that children who are active need less sleep than say a child who is passive and lacking in mental stimulation. So sleep then is determined primarily by the degree of, activity, diet and mental condition of the child. Most youngsters dislike bedtime as they're afraid they might miss something. It is often a battle of wills to get them to bed. The best thing to do is to establish a nightly routine of showers, dental hygiene and bedtime stories. This works quite well with my sons. Of course, a different routine is necessary with older children. You need to work out a program of sleep patterns that works for you and your family.

3. Conclusion

It is important to encourage your child to indulge an opportunity to be physically active. Help your child become involved in a sport of his/her choice. Develop interest in sports as a family. Do specific exercises with your child to help him/her supplement normal physical activity. Run or jog at least three times a week as a family.

Discourage the use of junk foods. Try not to keep foods you don't wish your child to consume in your house (rather than prohibit it). Read all labels carefully and educate your children to do likewise (not necessary if eating only raw fruits and vegetables—no labels). Follow a Hygienic regime of proper diet and lifestyle—consumption of fresh, raw fruits, vegetables, nuts and seeds; take plenty of fresh air and sunshine; and exercise.

Here's to a future of continued good health to you and your family.

4. Questions & Answers

How does a family of four with both parents at work all day manage to follow an exercise program?

> Ask yourself this question: am I going to allow my family's health to deteriorate which will be more costly in the long run or am I going to grab every opportunity I can get to engage in physical activity? It should be quite clear what the answer to this question is. Here are a few suggestions: Instead of watching TV in the evening, spend an hour or so going for a walk in a park or forest nearby your home. Take time on the weekend to go bicycling with your family. Enroll at a fitness center. These are just a few things you can do-to safeguard the health of your entire family. I'm sure you could think of others. Just eliminate a passive activity from your daily routine and replace it with an active one. Your family will love you for it and you'll all feel great!

My son shows no interest whatsoever in physical activity. He just wants to watch TV all the time. What can I do?

> As far as the TV is concerned make rules as to how much television he can watch each day. When the amount of television has been watched, he is to do something else. Your child's lack of interest could be for many reasons. Find the reason. He might be the type of person who needs to be inspired or motivated. Or perhaps he had an injury which you are unaware of and has pain. The type of diet your child consumes also plays a key role. On tests done with athletes, those who were placed on a diet of natural and wholesome foods performed better and had more of a desire to do so than those on the conventional diet of processed, adulterated foods.

My son seems to sleep less now that he is enrolled in a karate class. Is this okay?

> You have absolutely nothing to be concerned with, it is perfectly normal. You see the more physical activity the body gets, the less sleep it requires. This is great for your child. He will now have more time to indulge in the activities of his choice.

Article #1: Exercise for Baby by Dr. Herbert M. Shelton

It is unfortunate that we have so long depended upon physicians with their drugs, their condoning and encouraging of bad habits, their fear of exercise and their anti-natural approach to all the problems of life and have not given more heed to the physical educator with his more natural approach to life. We are paying a terrible toll in suffering and premature death for our faith in the destructive agencies of physicians and our rejection of the constructive things of nature.

The physicians have established, for our guidance, a whole series of false (and low) standards based on averages of abnormals and, then, they have resisted everything that will assure true (and higher) standards.

To the everlasting credit of Sylvester Graham, Drs. R. T. Trall, Geo. Taylor, Chas. E. Page, and others

who were the real pioneers in the *Hygienic* movement, they made a study of physical education and employed its principles in their care of both the well and the sick.

Beginning at birth with a program of physical education for the baby, Dr. Page insisted that babies should be placed face-down upon their beds and not upon their backs, as was, and is, the rule. He insisted that they developed better and faster in this position. When an infant moves its arms and legs in this position it does so against resistance. Merely kicking the air with its legs and waving its arms while lying on the back offers no resistance. I have watched an infant push its way across the bed lying face down, at only one week of age. Here is real exercise; exercise that calls for vigorous use of the muscles, especially those of the legs and thighs. The infant will raise its head, shoulder, hips and thighs backward, thus giving vigorous exercise to its spinal muscles. The beauty of the cords of muscles on each side of its spinal column is matched only by those of the strongman.

Suppose from birth, kittens, puppies, calves, colts and chickens were placed on their backs and never permitted to use their legs for anything more vigorous than merely waving or kicking them; would these animals ever walk? If young monkeys and apes were placed on their backs and not called upon to use their legs and arms, if they were not also forced to swing by their arms, what slow development we would logically expect! Why must we continue to hamper the development of our own young by placing them on their backs and keeping them there?

Dr. Tilden, after years of employing this plan, wrote in his *Care of Children* (1916): "Place the baby on its belly (Dr. C. E. Page's method), and allow it to stay on the belly rather than on the back. The Page method works out well. Children walk and run much earlier.

The fetal spine is a flexed spine. To bring it into a position of extension and hold it there requires the development of the spinal muscles. The wiggling and squirming of the infant, while lying face-down, develops the spinal muscles as they cannot be developed if it is placed on its back.

When the baby with well-developed spinal muscles comes to sit up, and it will do so at a much earlier date, it will sit erect, because its muscles will be strong enough to hold it erect.

I have emphasized the development of the spinal, arm and leg muscles that takes place in the prone position. It is necessary that I mention that the side muscles and the muscles of the abdomen are also called into vigorous action by the movements of this position. The strength of these muscles also helps to hold the baby erect when it sits up.

Does this mean that the child should never be placed on its back; or, on its side? By no means. It needs the vigorous, spasmodic kicking of its legs and flinging of its arms to develop these. All of its muscles need and must have exercise in various ways.

Crawling, or creeping, calls for a certain amount of strength in the muscles of the arms, chest and shoulders. This strength is developed faster if the baby is placed on its face and allowed to use its arms against resistance. The baby will learn early to lift the upper part of its trunk with its arms. Also, it will early learn to draw its legs and thighs up and assume the knee-chest position. All of this strength and use of the muscles must be acquired before it can begin to crawl.

There is more involved in the exercise of the baby's body than that of muscular development. There is also mental development. The baby learns to do things. It becomes conscious of its muscles and of its powers. Muscular consciousness is gained faster if the muscles are employed against resistance than if the limbs are merely flung wildly about. Neuromuscular coordination also is gained more rapidly if resistance is offered to the movements of the parts of the body than when no resistance is offered.

The period in which the infant crawls is one during which the trunk muscles and those of the arms and legs and thighs are strengthened. Especially the muscles of the abdominal wall, lower back and shoulder girdle are strengthened by the act of crawling.

Play pens, now popular with ignorant and lazy mothers, are an evil influence in the lives of babies. Babies confined within the narrow railings of these abdominal prisons have no incentive to crawl far,

thus they miss this much needed exercise.

Dr. Page contrasts our methods of caring for babies with those employed in nature in caring for puppies, kittens and the young of other animals. We hold the babies, carry them, put them in baby carriages, coddle them and make of them little tyrants that are constantly demanding attention.

"The young of some species," says Page, "are, upon occasion carried by their parents from one point to another; but beyond this they furnish their own transportation. Their parents roll and tumble them about, more or less, for mutual pleasure; but in the main they are from the beginning forced to rely upon themselves. Everywhere among animals we observe the same thing: the young are never overtended. They have no baby carts in which to spend a great part of their time, to their physical disadvantage; like our pampered baby aristocrats. They are not taught to sit down with a box of playthings in front of them to prevent them from being tempted to make their way to distant objects. If they chance to see anything they want, it never comes to them. It is Mohamet and the mountain every time; the creature and the thing never come together, except through the exertion of the creature! Hence they grow lusty and strong and healthy. They earn their diet, and therefore it is digested and assimilated. Their frames are covered with well-knit muscles—not a continuous fatty tumor, with scarcely any sound muscles beneath. In short, they are from the very outset, kept in 'condition'."

This emphasis upon exercise for infants needs to be re-stressed. They need to be rolled and tumbled about as do the other little animals, and they and their parents derive as much sheer joy from this as do the lower creatures.

In *The Hygienic Care of Children* I have emphasized the evils of toys. Babies do not need and should not have these playthings. They need opportunity for activity—for exertion.

The normal baby is able, at birth to grasp a pencil or other appropriate object in one hand and hang from this, holding up the weight of its body with but one hand. In "authoritative" works on babies we are told that they soon lose this ability. This is true, however, only if they are not permitted to use their hands in this manner.

Physical educators are agreed that hanging by the arms affords the best type of activity for the development of the chest, shoulder girdle and arms of the child. I can see no reason why this activity needs to be delayed until the child is three or four years old. It may be started at once—at birth. A good strong grip developed early in this way, will save the child many falls and injuries a little later. The infant of two months will delight in holding on to your fingers and by the use of both arms and legs, doing deep knee bends and squats.

We have an unfounded fear of permitting a baby to stand on its legs before these are "strong enough to support its body." There is no better way of strengthening the legs than that of permitting the baby to use the legs against resistance in this way.

By the third month, the normal baby, will hold on to your fingers, stand up and raise up on its toes. Babies are not ' the frail little animals we seem to think and they are as fond of activity as puppies and kittens.

It is perfectly true that babies are more helpless at birth than most young animals and this period of helplessness lasts longer than it does in animals, but the principles of proper care for both groups are the same. Babies need exercise and they need to be permitted to do things for themselves. How are they to learn to do things for themselves if these are always done for them? I know a nineteen-year-old girl who does not know how to tie her own shoes, because, and only because, her mother or others have always done this for her.